

Deepbite management with clear aligners

DR FLAVIO FRISARDI explains how to treat deepbite malocclusion with Nuvola clear aligners

Nuvola clear aligners represent a good choice for all those dentists and orthodontists who want to treat cases where their patients do not want traditional and uncomfortable fixed appliances. Dentists need to understand the way teeth move and how to select the right case. This procedure needs to be followed in order to have a good control of the single case, before the aligners are manufactured and delivered.

The aligners I have used in this case offer the possibility of treating adult patients who present a relapse after a history of fixed appliances, or others who do not feel comfortable with the idea of wearing fixed appliances and, for this reason, decide to renounce their smile. As you all can imagine, these are the kinds of patients who tend to request invisible orthodontics, although, in recent years, demands have also come from many teenagers. In this case, I present the treatment of an adult patient looking for the opportunity to improve his smile without the discomfort and look of traditional braces.

CASE REPORT

The patient presented dental, class 2, malocclusion, deep bite, negative torque of the lower and upper incisors, division two, severe crowding of the lower and upper incisors. Normally, in cases of deep bite and severe crowding, I focus my attention on the axial position of the canine. Most of the time, crowding of the lower teeth depends on the negative torque of them, which leads to intercanine distance reduction and, consequently, loss of space.

Initially I began to move the canines' vestibular with the use of rectangular vertical attachment, horizontal rectangular attachments on the upper and lower bicuspid. This was done in order to have a posterior light extrusion vector. Once the bite was opened, I started to move both the upper and lower incisors forward. In order to establish a correct overjet value, oval attachments were positioned on the lower incisors, so as to improve the aligners fitting, and permit intrusion vector biomechanics.



Figure 1: Front view before treatment



Figure 2: Left view before treatment



Figure 3: Right view before treatment



Figure 4: Lower arch before treatment



Figure 5: Upper arch before treatment



Figure 6: Upper arch after treatment



Figure 7: Front view after treatment



Figure 8: Left view after treatment



Figure 9: Right view after treatment



Figure 10: Lower arch after treatment



Figure 11: Final result after the ceramic veneers

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To achieve a proper alignment of the upper and lower arches, a minimum IPR was planned just on the lower incisors (0.1mm). A transversal expansion of the anterior area (1.5mm) was achieved on both sides due to the canine axial correction. A total of 18 aligners were used on the upper arches and 22 aligners on the lower arch. As can be seen in the images, a good alignment was achieved, the bite was opened and the axial position of the anterior teeth was improved. The overjet and overbite values were also corrected.

After the invisible orthodontic treatment, we finished with porcelain veneers from the upper first right premolar to the upper first left premolars (Figure 11).

END RESULT

An aesthetically pleasing result was achieved and the patient was very satisfied. As the image of inferior arch after alignment shows, the reason why I decided to splint the inferior lower arch was dependant on the lower stability that 'no-extraction' cases present in the long term, whereas, on the upper arch, a removable retainer was delivered to be worn 20 hours per day. **OP**

FACTFILE

Flavio Frisardi qualified as a dentist from the Università Politecnica delle Marche (Ancona) in 2003. He is currently responsible for two Epochè Dental Care Centres in Rome and in Nettuno where Epochè Training Centre is located. Flavio is the lead speaker for the system of invisible braces made in Italy (Cloud) and is co-author of the book 'Progress in Gnathology'.

